

JAP20 Rec'd PCT/PTO 06 MAR 2006  
AMENDED CLAIMS

[Received by the International Bureau on 21 JUNE 2004 (21.06.04) claim 1, amended;  
remaining claims unchanged; (1 pages) ]

## CLAIMS

1. A screw press (1) for pressing fibrous material, in particular sugar beet pulp, comprising:
  - a pair of adjacent counter-rotating shafts (20, 30) having their axes (X-X, X'-X'), disposed parallel to each other, said shafts (20, 30) each being provided externally with a box-like helical structure (21, 31), each helical structure (21, 31) winding in the opposite direction to the helical structure of the other shaft;
  - a perforated walled filtering cage (4) enclosing said helical structures (21, 31) as an exact fit;
- 10 - a loading hopper (10) for feeding the fibrous material to the press (1);
- a discharge aperture (11) for the exit of the pressed material;
- a collection sump (12) positioned externally to said filtering cage (4) to collect the liquid component of the pressed fibrous material,
- characterised in that each box-like helical structure (21, 31) comprises a helix (22, 32) and a helical element (23, 33), said helical element (27, 37) forming a helical interspace (27, 37) with the outer surface of the shaft (20, 30) and comprising at least one perforated surface (24, 34), said perforated surface (24, 34) having a length (L) along the axis (X-X, X'-X') of the shaft (20, 30) which at every point is less than the pitch (P) of the helix (22, 32) by an amount sufficient
- 15 to leave free a channel adjacent to the helix (22, 32) in which the helix (23, 33) of the adjacent shaft (30, 20) is received.
- 20 2. A press (1) as claimed in claim 1, wherein said shaft (20, 30) has a cylindrical outer surface.
- 25 3. A press (1) as claimed in claim 1, wherein said shaft (20, 30) has a conical outer surface.